

MINING APPLICATION  
NO. ACT/019/011  
Date 3/7/80

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING  
1588 West North Temple  
Salt Lake City, Utah 84116

MINING AND RECLAMATION PLAN  
(Other forms may be used in lieu of MR 2, provided  
they contain the same information)

1. Name of Applicant or Company Minerals Recovery Corporation
2. Proposed type of operation underground uranium mining
3. (a) Prior Land Use(s) none  
(b) Current Land Use(s) none  
(c) Possible or Prospective Future Land Use(s) grazing
4. What vegetation exists on the land proposed to be affected \_\_\_\_\_  
sagebrush, sand grass, greasewood  
(a) Types and Estimated Percent cover or density: \_\_\_\_\_  
10% - 20% total
5. What is the pH range of soil before mining? 8.6 pH  
Name of Person or Agency and method of determining pH \_\_\_\_\_  
Grand Junction Laboratories (101) electrometric
6. Site elevation above sea level 4300
7. In case of coal, oil shale, and bituminous sandstone:  
Principal seam(s) and thickness(es) \_\_\_\_\_
8. Estimated duration of mining operations 2 years
9. Has overburden, waste or rejected materials been classified as acid or alkali producing? ( ) Yes (x) No  
Does the above material being moved have any other characteristics affecting revegetation? \_\_\_\_\_
10. Will any underground workings or aquifers be encountered? (x) Yes ( ) No  
Describe going through the old workings.  
Is there an active discharge of water from abandoned deep mines on or crossing the land affected? (x) Yes ( ) No If yes, describe the quality of water being discharged. see attached



JOHN C. KEPHART & CO.  
GRAND JUNCTION LABORATORIES

435 NORTH AVENUE

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GRAND JUNCTION, COLORADO 81501

ANALYTICAL REPORT

Received from: **Minerals Recovery**

Customer No. \_\_\_\_\_ Laboratory No. 1847 Sample Water

Date Received Jan 10, 1980 Date Reported Jan 16, 1980

Sample	Yellow Cat Water - <i>JOHN MINE</i>
Suspended Solids	2.0 mg/L
Dissolved Solids	964 "
Ph	8.6
Arsenic(As)	0.116 mg/L
Selenium(Se)	0.154 "
Uranium(U)	1.67 "
Zinc(Zn)	0.006 mg/L
Cadmium(Cd)	0.002 "
Molybdenum(Mo)	0.794 "
Vanadium(V)	0.269 mg/L
COD	0.6 "

NOTE: This is to be attached to Item 10 of page 1 of MR for 2 for Mining and Reclamation plan. The water will be pumped out on an occasional basis into the stock pond for livestock in the area.

By *[Signature]*



11. Describe specifically a detailed procedure for:
- (a) The mining sequence
  - (b) The procedure for constructing and maintaining access roads, to include a typical cross-section and a profile of the proposed road grades.
  - (c) The procedure for site preparation including removing trees and brush.
  - (d) The method for removing and stockpiling topsoil or disturbed materials.
  - (e) The method for the placement or containment of all disturbed materials, to include the method for handling of all acid or alkali-producing and toxic materials.
  - (f) A procedure for final stabilization of disturbed materials.

GRADING AND REGRADING

Specifically describe:

- (a) Typical cross-section of regrading.
- (b) The method of spreading topsoil or upper horizon material on the regraded area and indicate the approximate thickness of the final surfacing material.
- (c) What type of soil treatment will be utilized.
- (d) The method of drainage control for the final regraded area.
- (e) Maximum grading slope.

TESTING

1. Describe method for testing stability of reclamation fill material.

Ditching and reseedling

Describe method for the testing of soil that is intended to support vegetation to be accomplished in accordance with the procedure outlined by the Utah State Univ. Soil Testing Lab.

2. Describe any soil treatment employed as an aid to revegetation \_\_\_\_\_  
possible fertilization \_\_\_\_\_

3. Describe surface preparation of areas intended to support vegetation:  
Scarifying with teeth on bucket of 950 loader  
\_\_\_\_\_  
\_\_\_\_\_

REVEGETATION

1. Revegetation to be completed by:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Operator        | <input type="checkbox"/> Hydroseeding                       |
| <input type="checkbox"/> Soil Conservation District | <input type="checkbox"/> Aerial Seeding                     |
| <input type="checkbox"/> Private Contractor         | <input type="checkbox"/> Conventional or Rangeland Drilling |
| <input type="checkbox"/> Other (specify) _____      | <input checked="" type="checkbox"/> Broadcast and Drag      |
|   | <input type="checkbox"/> Other _____                        |

- 11 (a) Underground - random room and pillar will be used with access being provided through previously existing mine entries. Waste generated during the mining operation will be stockpiled on previously existing waste dumps. The ore will be stockpiled on the ground until shipped to the mill.
- (b) Access roads to the operations were existing from the previous operations in the early 1950's. These roads will be used for all operations and no new roads are required.
- (c) Site preparation is minimal, in that the previously existing waste dumps and stockpile areas will be utilized. There are no trees to remove and only a minimal amount of sagebrush.
- (d) No topsoil will be removed or disturbed.
- (e) The only disturbed materials will be from the underground mining operation.
- (f) No stabilization of disturbed material will be necessary. (A) Waste material from the mining operation will be contoured and seeded, (b) The topsoil will be undisturbed. After cessation of operations, all extraneous debris, scrap metal, discarded wood and unusable buildings will be buried or removed from the property. All vent holes and portals will be sealed to prevent entry when their usefulness is over.

#### Grading and Regrading

- (a) Grading and regrading will not be necessary since the original contour of the ground will not be disturbed on the stockpile or mine entry areas. Revegetation of these areas will be done on the existing soil and with seeding indigenous to the area.
- (b) Spreading soil will not be spread or mixed with the natural ground because the natural ground and weathered rock is not considered to be much more infertile than the soil.
- (c) The area will be fertilized in accordance with recommendations of the soil lab.
- (d) The method of drainage control for the final regraded area will essentially be the same as before mining operations. The drainage will follow the natural topography of the land with no soil erosion or blockage of channels.
- (e) The present grading slope is between 3-5 percent, and after mining operations it will be the same.



2. Will Mulch be used? ( ) Yes (x) No

Type: \_\_\_\_\_ Rate/Acre \_\_\_\_\_ lbs.

3. Revegetation Plan and Schedule -

Species	Rate/ Acre	Planting Location	Facing N-S-E-W	Season to be replanted
Russian Wildrye	31b/acre	N $\frac{1}{2}$ Section 1	all	Fall
Crested Wheatgr	41b/acre			
interwheatgrass	41b/acre			
fourwing saltbrush	11b/acre			
yellow sweetclover	11b/acre			
indian ricegrass	11b/acre			

4. Will affected area be subject to livestock or wildlife grazing?

(x) Yes ( ) No Will vegetation protection be needed? \_\_\_\_\_  
no

5. Will irrigation be used: ( ) Yes (x) No Type \_\_\_\_\_

6. Describe maintenance procedures for revegetation if needed, until surety release is granted.

Reseeding until vegetation is established  
or until it has been demonstrated that the area will or  
will not support this additional vegetation.



STATE OF Colorado

COUNTY OF Jefferson

I, Eric Newman, having been duly sworn  
depone and attest that all of the representations contained in the foregoing  
application are true to the best of my knowledge; that I am authorized to  
complete and file this application on behalf of the Applicant and this  
application has been executed as required by law.

Signed: Eric Newman

Taken, subscribed and sworn to before me the undersigned authority  
in my said county, this 4 day of February, 1988.

Notary Public: [Signature]

My Commission Expires July 21, 1982

My Commission Expires: \_\_\_\_\_

Residing In: Wheat Ridge, Colorado

PLEASE NOTE:

Section 40-8-13(2) of the Mined Land Reclamation Act provides as  
follows:

"Information relating to the location, size, or nature  
of the deposit and marked confidential by the operator,  
shall be protected as confidential information by the  
Board and the Division and not be a matter of public  
record in the absence of a written release from the  
operator, or until the mining operation has been  
terminated as provided in subsection (2) of section  
40-8-21."

Is confidential information contained herein?

YES \_\_\_\_\_ (Initial)

NO [Signature] (Initial)

Sections desired to be maintained as confidential information -

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_